

MANAGING SAFETY ASSETS ON A UNIVERSITY CAMPUS

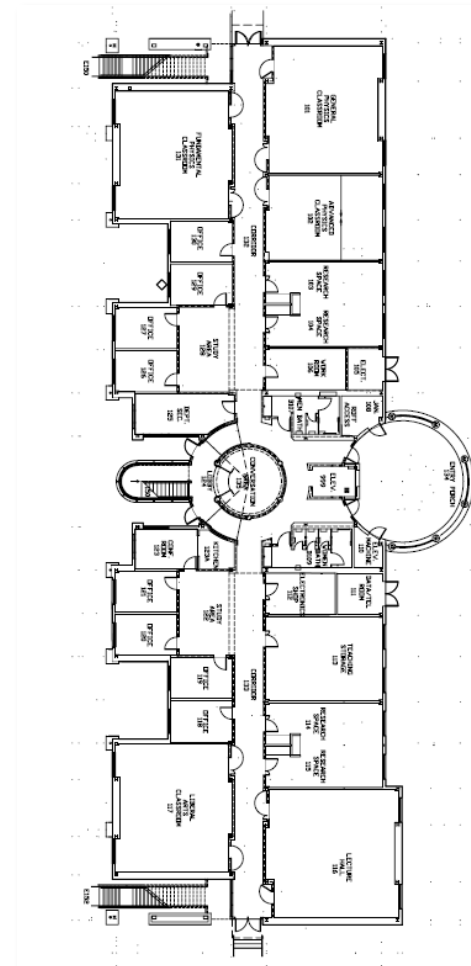
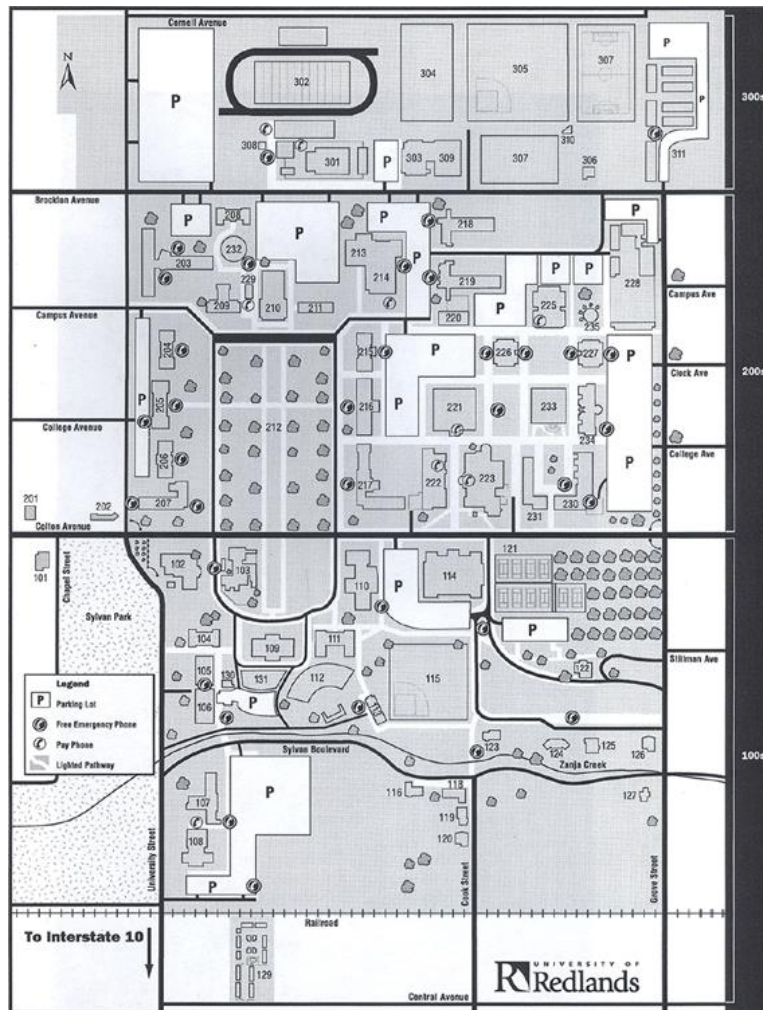
Mari Cruz Escarcega
MS GIS Program
University of Redlands

Partner

- University of Redlands Facilities Department
- Founded in 1906
- Provide maintenance and repair to 60 buildings



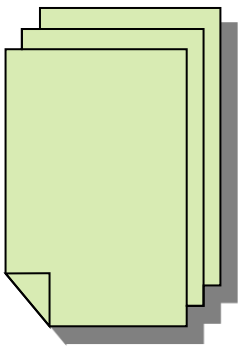
Campus Maps



Floor plan

Problem Statement

- Data exists in multiple formats
- Keeping data current
- Risk of loosing documentation



Data Types



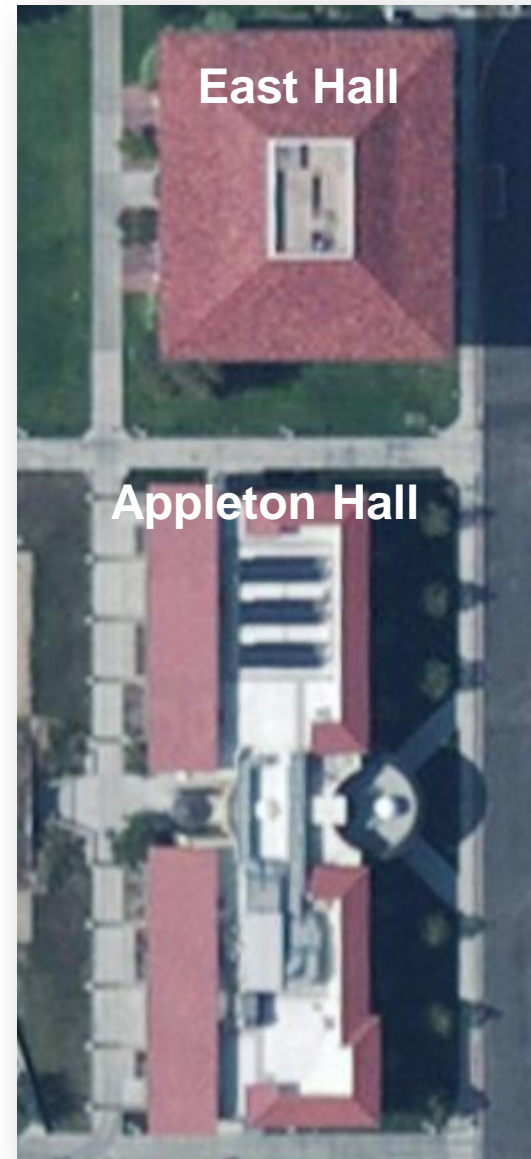
Safety Assets



Rooms

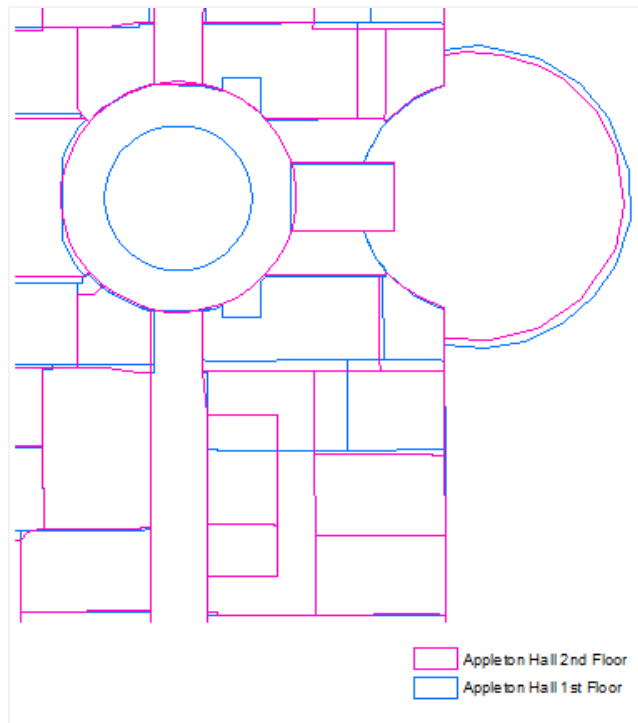


Floors



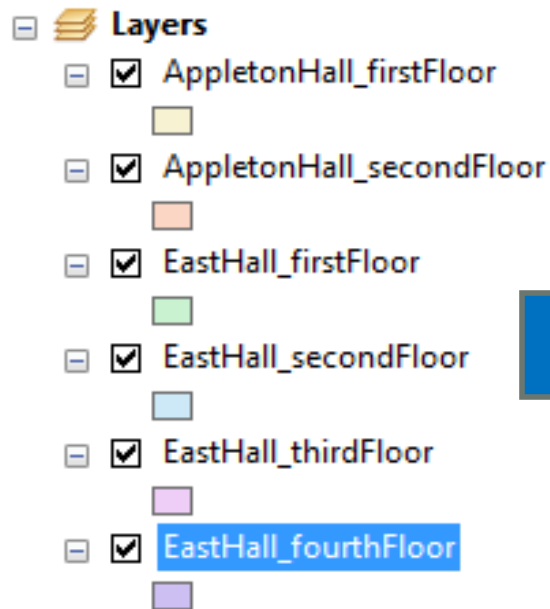
Buildings

Original Data

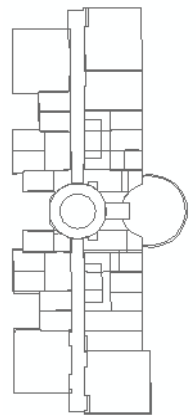
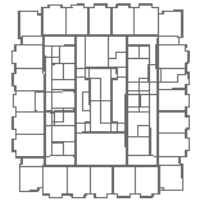


Data Scrubbing

- Organizing Data
- Data Input
- Merge
- Feature Classes
 - 2 Types

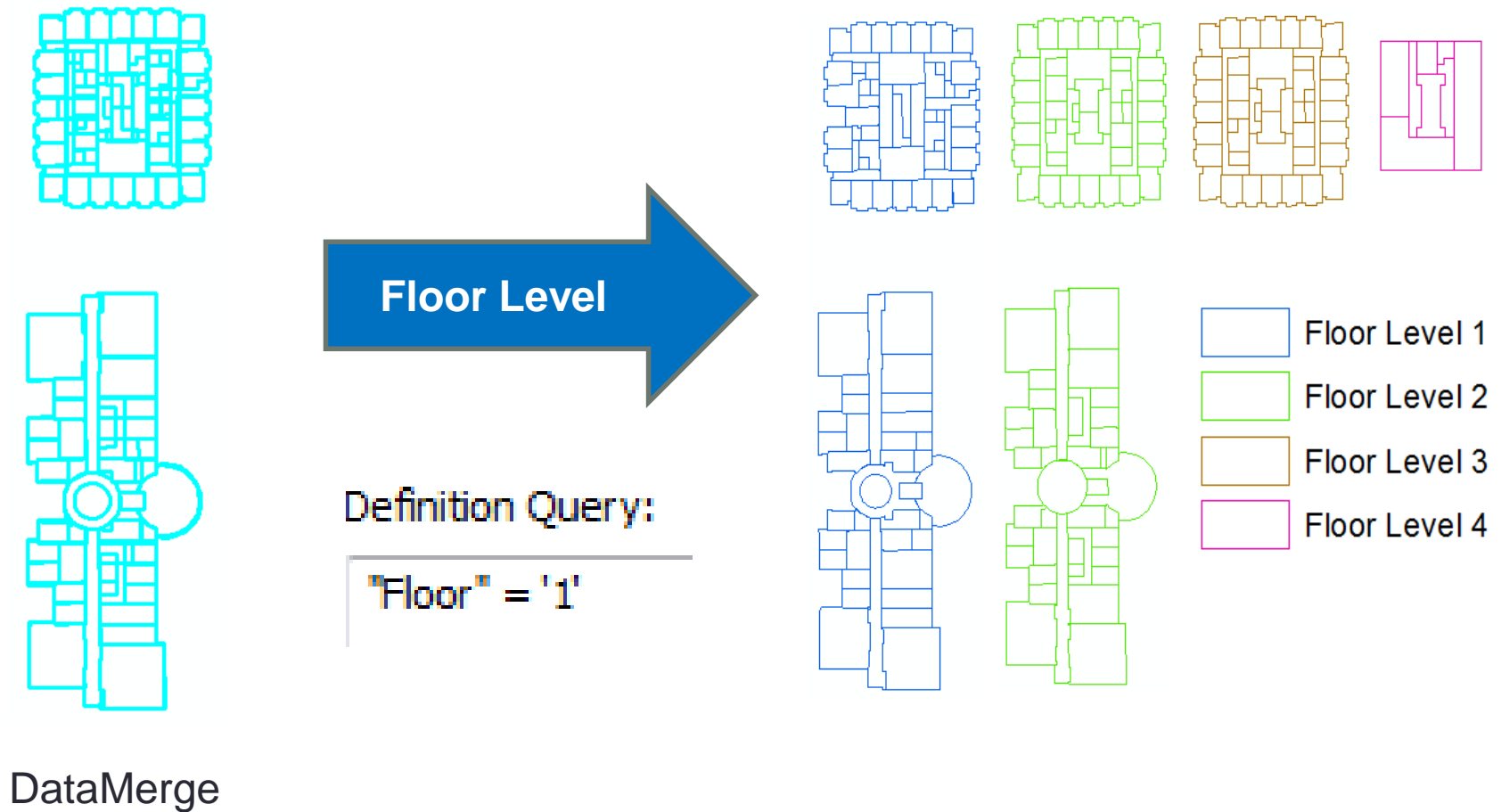


Merge

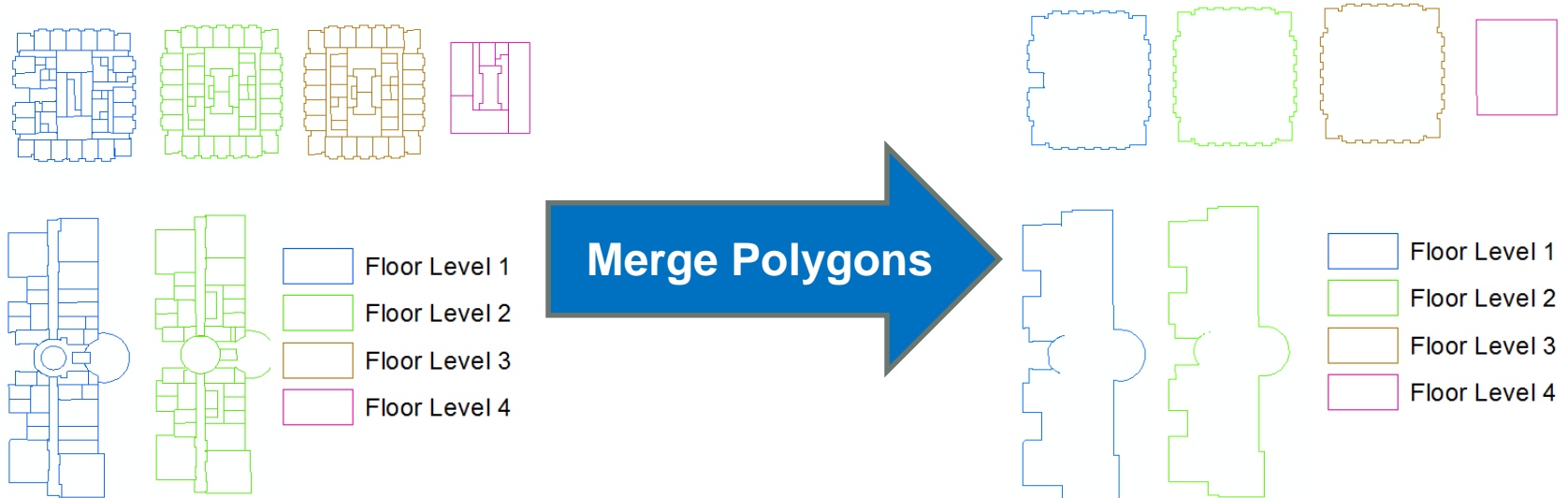


DataMerge

Floor Definition Query

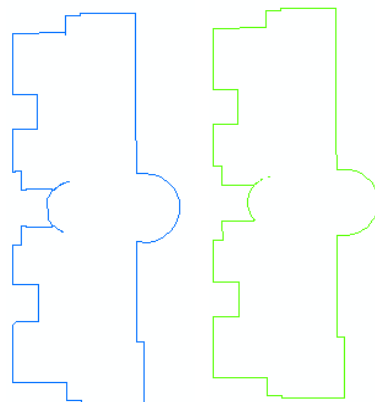
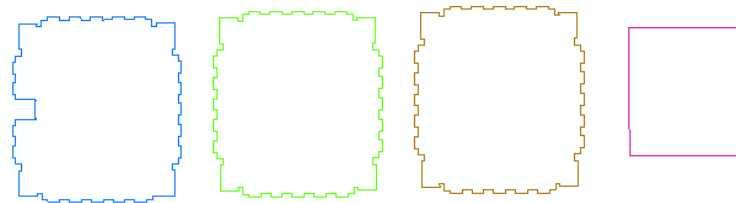


Merge Polygons

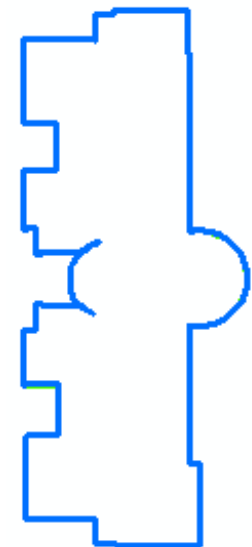
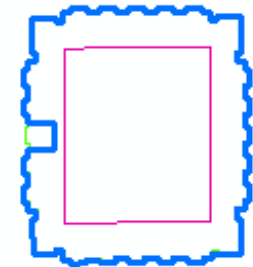
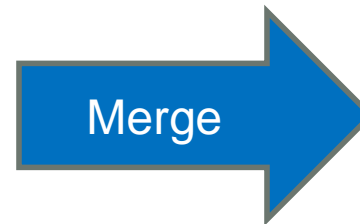


Floor Level Feature Classes

Final Geoprocessing

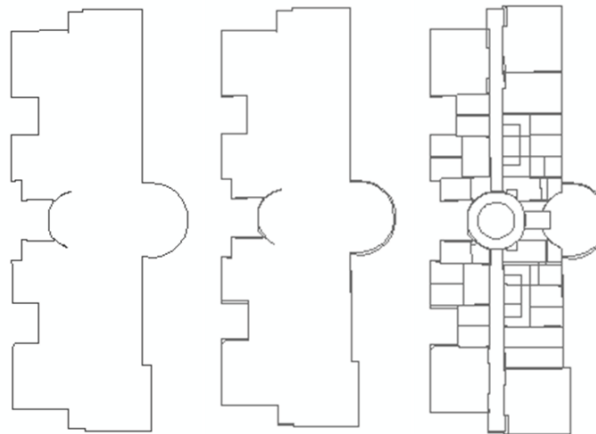
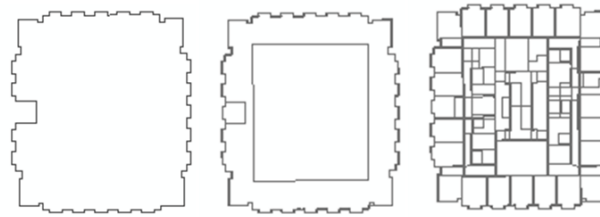


-  Floor Level 1
-  Floor Level 2
-  Floor Level 3
-  Floor Level 4



Floors

Final Feature Classes



Buildings

Floors

Room

OBJECTID *	Shape *	SQ_Footage	BLDG_Name *	BLDG_Code *
1	Polygon ZM	25366	Appleton Hall	234
2	Polygon ZM	34761	East Hall	227

BLDG_Name	BLDG_Code *	Floor *	FloorID *
East Hall	227	1	EAS_1
Appleton Hall	234	1	APL_1
East Hall	227	2	EAS_2
Appleton Hall	234	2	APL_2
East Hall	227	3	EAS_3
East Hall	227	4	EAS_4

FloorID *	Rm_ID *	Rm_No *	RmType	Room Description	Notes
APL_1	APL_101	101	Classroom	<Null>	
APL_1	APL_102	102	Classroom	<Null>	
APL_1	APL_103	103	Lab	Reasearch Space	
APL_1	APL_104	104	Lab	Research Space	
APL_1	APL_105	105	Utility	Electrical	
APL_1	APL_106	106	Lab	Instructional Lab	
APL_1	APL_108	108	Roof Access	<Null>	
APL_1	APL_107	107	Bathroom	Women	

Geodatabase

Buildings	
PK	<u>Bldg_Code</u>
	Bldg_Name LOC_Area FSPRN Year Built Sq Footage Notes

Floor Level	
PK	<u>FloorID</u>
	Bldg_Name Bldg_Code Floor Descr Floor Span Notes SqFootage

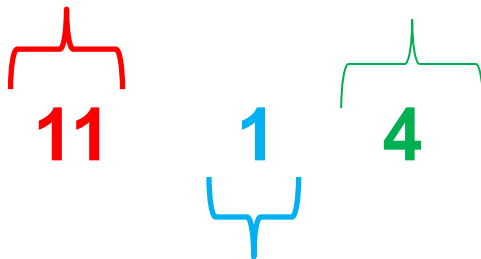
Room	
PK	<u>Rm_ID</u>
	FloorID Rm_No Rm_Type RmDec

Safety Assets	
PK	<u>Rm_No</u>
	RmID Floor LOC_Area CreatedBy CreatedOn ModifiedBy ModifiedOn EqType EqID Condition InspectedBy InspectedOn Inspection_Cycle

Cleaning My Room

Coding Standard

Campus use Room description



Room type

Database Properties

General Domains

Domain Name	Description
Community Area	Community Area
Condition	Condition
Conference Room	Conference Room
InspectionCycle	Inspection Cycle
Kitchen	Kitchen
Lab	Lab
Lecture Hall	Lecture Hall
Office	Office

Domain Properties:

Field Type	Short Integer
Domain Type	Coded Values
Split policy	Default Value
Merge policy	Default Value

Coded Values:

Code	Description
1114	Research Space
1113	Instructional Lab
1111	Animal Care
1112	Computer Lab

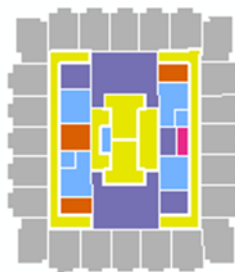
OK Cancel Apply

Campus Use

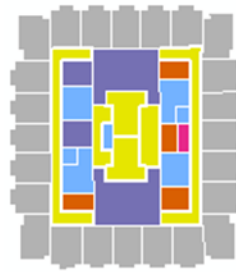
Floor level 1



Floor level 2



Floor level 3



Floor level 4



Campus Use Areas

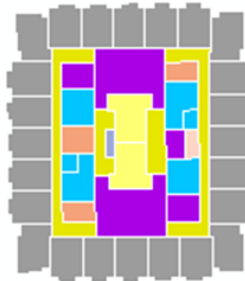
- Academic
- Administration
- Community
- Corridors
- Operations
- Plumbing Areas
- Residential

Room Types

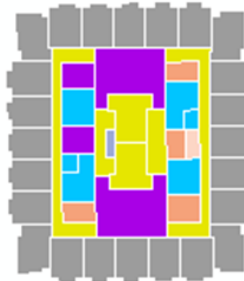
Room Level 1



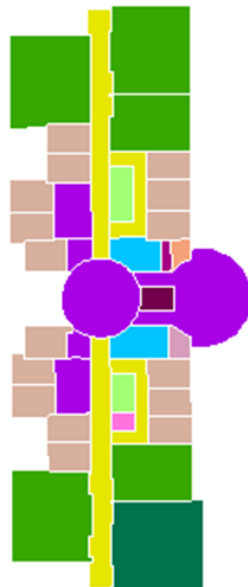
Room Level 2



Room Level 3



Room Level 4














FloorID	APL_1
Rm_No	102
RmType	Classroom
RmDescription	<Null>
CampusUse	<Null>
Notes	Classroom Type 1
SQ_Footage	Classroom Type 2
	Classroom Type 3

Room Type

Stairs	Work Room	Server
Corridor	Lecture Hall	Utility
Bathroom	Community Area	Roof Access
Kitchen	Conference Room	Elevator
Laundry	Office	Elevator Equipment
Lab	Storage	Custodial
Classroom	Network Equipment	Residence

Safety Assets

- ☒ **SafetyAssets**
- Equipment Type
-  Fire Bell
 -  Campus Shutoff
 -  Control Panel
 -  Fire Extinguisher
 -  Fire Pull
 -  Heat Detector
 -  OSY
 -  PIV
 -  Riser
 -  Smoke Detector
 -  Strobe
 - ☐ Sub Panel

Feature Class Properties

General	Editor Tracking	XY Coordinate
Z Coordinate System	Domain, Resolution and Tolerance	Fields
Subtypes	Feature Extent	Relationships

Subtype Field:

Default Subtype:

Subtypes:

Code	Description
1502	Fire Control Panel
1503	Fire Extinguisher
1504	Fire Pull
1505	Heat Detector
1506	Smoke Detector
1507	Strobe

Default Values and Domains:

Field Name	Default Value	Domain
InspectionCycle	3	InspectionCycle
Rm_ID		
LOC_Area		
FloorID		
Notes		
Condition		Condition

Use Defaults Domains...

Database Properties

General Domains

Domain Name	Description
Bathroom	Bathroom Type
Boolean	Boolean
Classroom	Type of classroom
Community Area	Community Area
Condition	Condition
Conference Room	Conference Room
InspectionCycle	Inspection Cycle
Kitchen	Kitchen

Domain Properties:

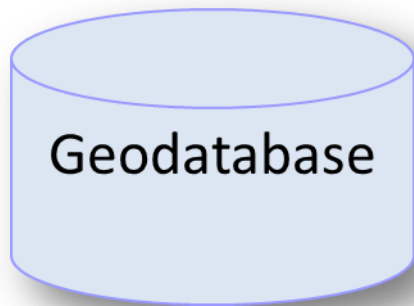
Field Type	Short Integer
Domain Type	Coded Values
Split policy	Default Value
Merge policy	Default Value

Coded Values:

Code	Description
3	Annual
1	60 days
2	90 days
4	Bi-Annual

OK Cancel Apply

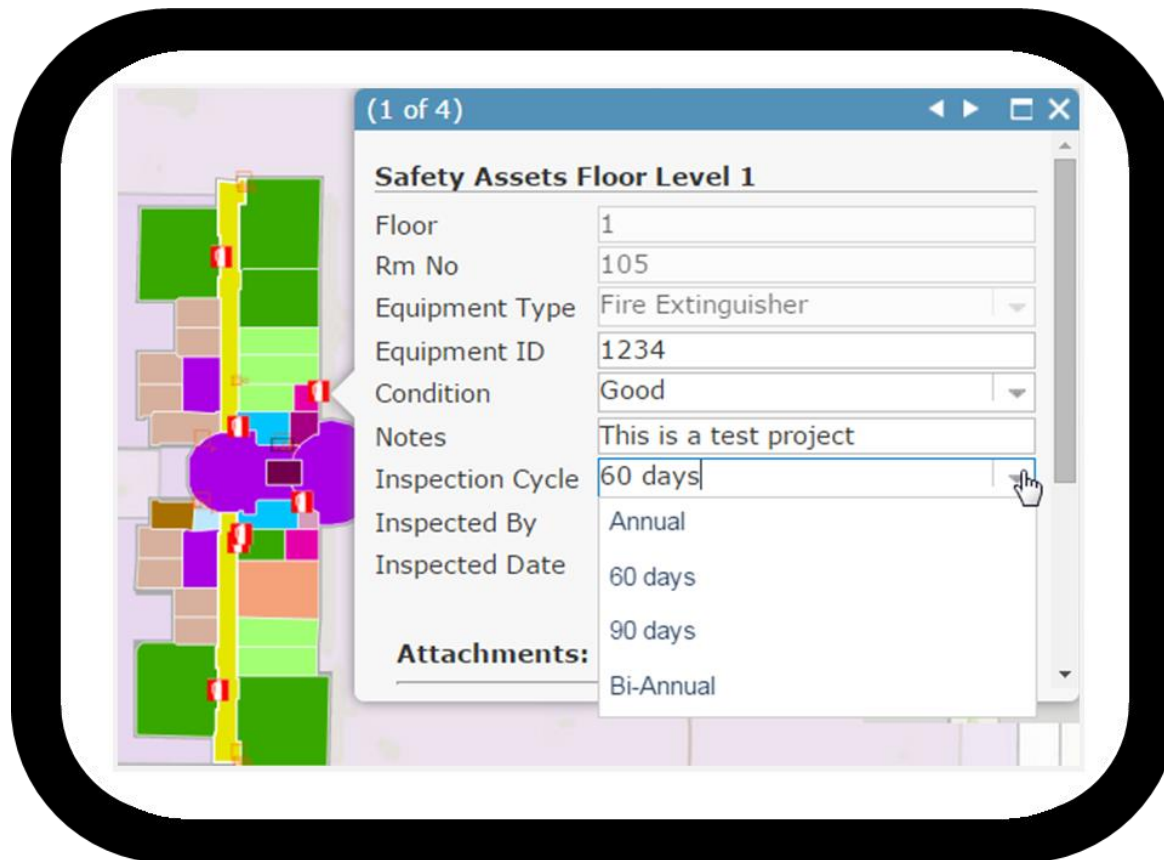
Data is Organized



Desktop



Publish as Feature Service



(1 of 4)

Safety Assets Floor Level 1

Floor	1
Rm No	105
Equipment Type	Fire Extinguisher
Equipment ID	1234
Condition	Good
Notes	This is a test project
Inspection Cycle	60 days
Inspected By	Annual
Inspected Date	60 days

Attachments:

- 90 days
- Bi-Annual

Summary

- Data is available in a single location
- Identify where equipment is located
- Improve safety planning

Questions

Thank You

Mari Escarcega

909-725-8431

escarcega2@gmail.com